



GB04/2538



INVESTOR IN PEOPLE

The Patent Office
Concept House
Cardiff Road
Newport
South Wales
NP10 8QQ

**PRIORITY
DOCUMENT**
SUBMITTED OR TRANSMITTED IN
COMPLIANCE WITH RULE 17.1(a) OR (b)

REC'D 27 SEP 2004

WIPO

PCT

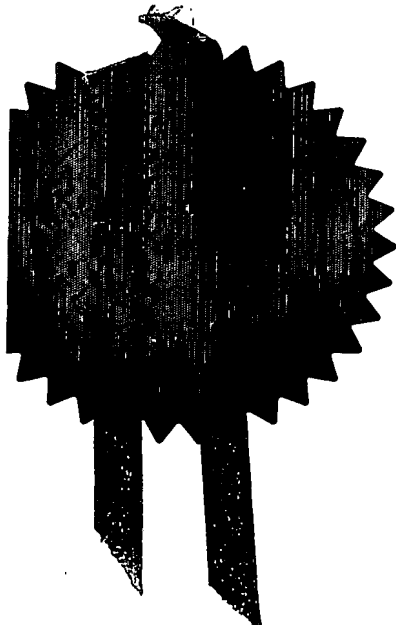
I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

I also certify that the application is now proceeding in the name as identified herein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.



Signed

JB Evans

Dated 14 September 2004



INVESTOR IN PEOPLE

GB 0313848.4

By virtue of a direction given under Section 30 of the Patents Act 1977, the application is proceeding in the name of:

UNIVERSITY OF LANCASTER,
University House,
Bailrigg,
LANCASTER,
LA1 4YW,
United Kingdom

Incorporated in the United Kingdom,

[ADP No. 00798298001]

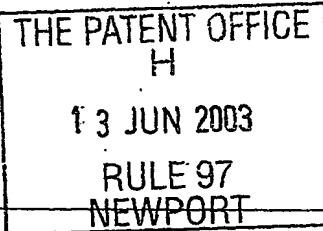
Patents Act 1977
(Rule 16)



16JUN03 E815230-3 B12663
P01/7700 0.00-0313848.4

Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)



The Patent Office

Cardiff Road
Newport
South Wales
NP10 8QQ

1. Your reference

2. Patent application number
(The Patent Office will fill in this part)

0313848.4

13 JUN 2003

3. Full name, address and postcode of the or of each applicant (underline all surnames)

James Allan Hudson
Flat 20 Bowland College
Lancaster University
LA1 4YT 11/8/04
8652851001

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

4. Title of the invention

Gesture Optimised list interaction

5. Name of your agent (if you have one)

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

URQUHART BYKES + LORD LLP
TOWER NORTH CENTRAL
MERRION WAY
LEEDS
LS2 8PA

Patents ADP number (if you know it)

F51/27 11/8/04

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number
(if you know it)

Date of filing
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

- a) any applicant named in part 3 is not an inventor, or
 - b) there is an inventor who is not named as an applicant, or
 - c) any named applicant is a corporate body.
- See note (d))

No

Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document

Continuation sheets of this form

Description 2

Claim(s)

Abstract

Drawing(s) 1 + 1

JML

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents (please specify)

11. I/We request the grant of a patent on the basis of this application.

Signature

Date

12-6-03

12. Name and daytime telephone number of person to contact in the United Kingdom

01524 592573

Warning

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.

Notes

- If you need help to fill in this form or you have any questions, please contact the Patent Office on 08459 500505.
- Write your answers in capital letters using black ink or you may type them.
- If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.
- If you have answered 'Yes' Patents Form 7/77 will need to be filed.
- Once you have filled in the form you must remember to sign and date it.
- For details of the fee and ways to pay please contact the Patent Office.

Overloaded and gesture optimised list based interaction.

This approach incorporates the use of mouse stroke gesture activated list elements 8. For the use on web sites, applications and other styles of computer interfaces, such as PDA's and mobile phone. Rather than the conventional point or select and click approach the user executes a mouse stroke gesture or otherwise, such as with the use of a touch screen where a trace of the figure stroke is executed. The approach uses hand writing recognition or similar algorithm to parse the gesture into a specific letter, number etc or command.

This approach differs from other gesture optimised approaches that use gestures to optimise the functionality of icons (Overloaded or otherwise) or menu items (menu icons) This approach proposes the optimisation of list based interaction, commonly found in mobile phones.

In the description an example of a mobile phone is used. In the context of searching for a phone number the user could execute an "L" 3 stroke listing all elements that begin with the letter "L", this could be executed over an enlarged button 7, perhaps with "name" on it, this button will accept a click that will execute the more common dialogue that is associated, such as "Search", "Add name", whereas a gesture will list the elements. This approach thus supports the old style of point and click interaction and the newer form as described. Another enlarged button could be used to either access control dialogues, perhaps with "menu" on it. As before supporting gestures for easy access of frequent commands and click interaction for less used actions.

Here we discuss the main feature, the execution of gestures on list elements to control list based interaction rather than using a keyboard or simply a gesture panel as in the diagram 7. After listing all elements beginning with "L" one side of the display with the listing of items beginning with "L" is designated for a further refined search 5. And the other side is used to execute commands 4. A simple click on a list item 8 will call up a standard dialogue with the usual commands, expected, such as, "Edit name", "Add number", "Delete number" & etc., For example the execution of n. "C" 5 which starts or perhaps ends on a list item on one side of the display would further refine the search to all elements containing an "L" and a "C" for example "Lucy". Whereas, the execution of a "C" which starts or perhaps ends 4 on a list item on the other side of the touch screen display would summon the command to connect a call, or a "V" which starts or perhaps ends would list the detail pertaining to that number. Optional optimisation: In addition to the concept, the initial screen would have a list of phone number elements that can be connected to with one or two click depending on settings or with the use of the appropriate gesture access dialogues or commands related to that list item and subsequent entry. This approach could also use Layers 1,2. Layered on top of a lists element would be a dynamic images¹, which act as layered icons 1,2. A (double) click over a phone number element 8 activates a connection to that number whereas, a gesture command related to the list of phone number layer will execute a related command, such as "E" executing the gesture to load up the edit item dialogue. A gesture related to the Dynamic layer will activate a command related to the overlaid. For example an overlaid layer of an animated envelope could represent commands related to "Text messaging" and other related activities. A "c" gesture could active a dialogue to "compose" a text message or an "I" gesture could be used to view messages in the "Inbox" and so on. Thus permitting the optimisation and overloading of screen real-estate.

The benefits of this approach are to preserve screen real- estate by reducing the need for or temporarily doing away with a screen consuming display dialogue i.e. a keyboard, suggesting and permitting a screen the size of the device. The approach reduces the size of a device by relieving the necessity for a hardware keyboard.

The execution of gestures is less cognitively demanding than the excessive use of hand eye coordination for primarily button and key activation. It could also be argued that gesture

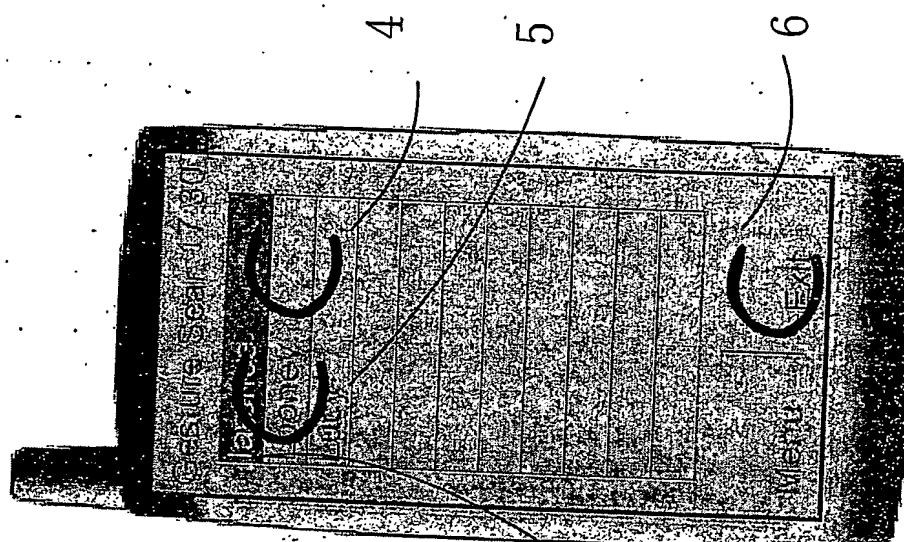
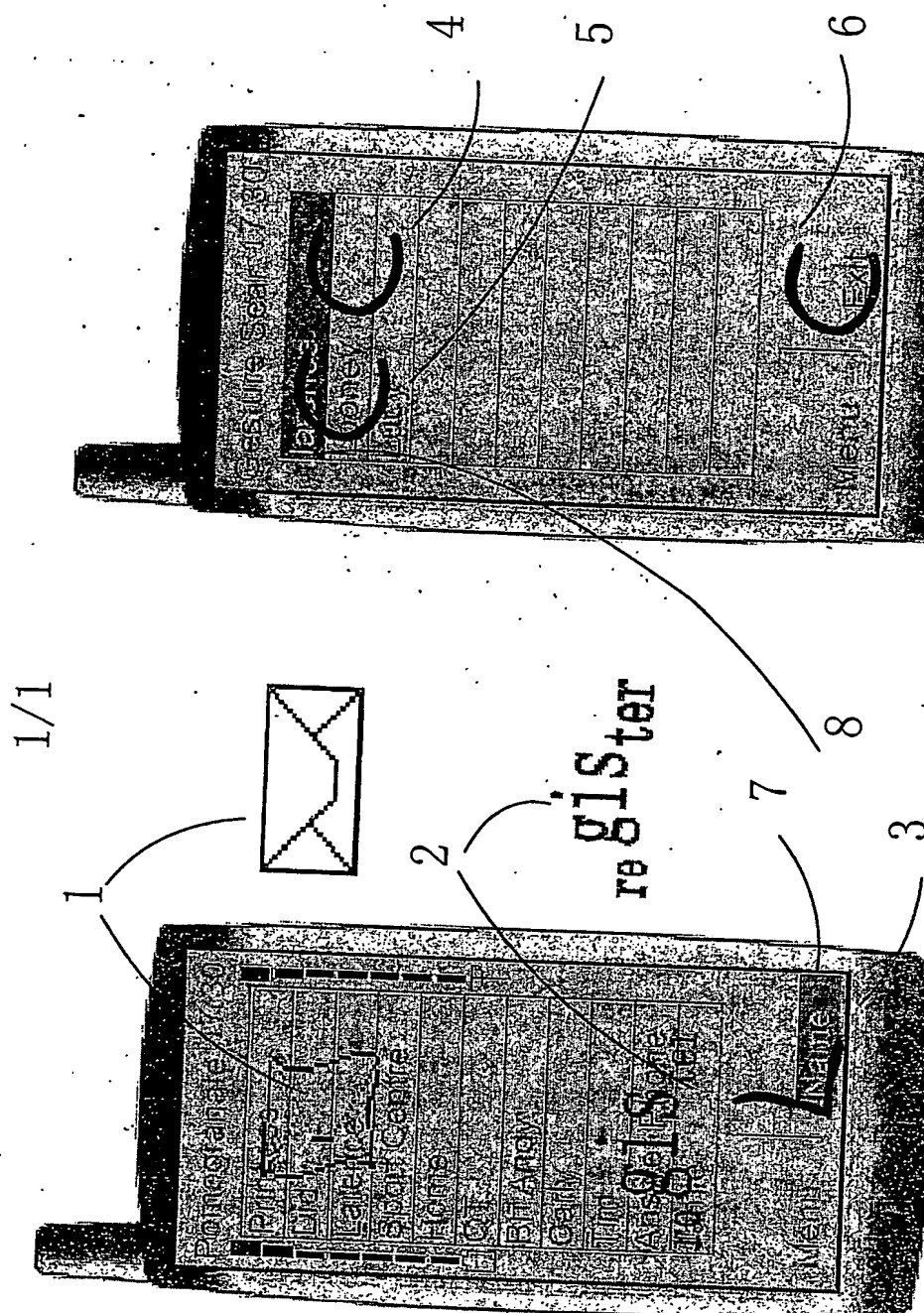
¹ The dynamic or animation is to maintain the coherency of the image making the background and foreground images mutually anti-occluded or mutually discernable

interaction possesses more of a cognitive purchase, permitting the user more of a handle or affordance for the actions and intentions.

To search for a (not optimised for quick access) random number with a conventional mobile could take 14+ clicks (executions) depending on the size of a list beginning with the specified letter. The worst-case scenario for the gesture optimised list interaction is three to four mouse stroke interactions.

Figure 1 shows a possible layout of the interface on a mock-up of a PDA style phone, with two animated and dynamic images 1,2 layered on top of the list driven interface, and a selected gesture interaction button (bottom right of image) in this case entitled "Names"7 with a gesture executed on the gesture interaction button 3

Figure 2 show the gesture interaction panel, in this case entitled "exit" with a "C" gesture executed on it 6 and a selected list item 8 with two gestures executed on either side, one for a command 4 and one for a refined search 5, which could be executed anywhere on that side of the display.



**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER: _____**

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.